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EXAMINER

PHILLIPS, HASSAN A

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/715,045

Applicant(s)

MACHIRAJU ET AL.

Examiner

Hassan Phillips

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-16,19-28 and 30-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-16,19-28 and 30-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to remarks and amendments filed on September 20, 2004.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A network resource sharing protocol is not a useful process, machine, manufacture, or composition of matter.

Response to Arguments

4. Applicant's arguments filed September 20, 2004 have been fully considered but they are not persuasive. Applicant argued that:

- a) In the teachings of Titmuss, the service being offered is completely unrelated to shareable resources of a first network element by a second network element;
- b) Titmuss fails to disclose cooperative execution of a task by first and second network elements as a result of a negotiation phase including an agreement of a cost for the use of shareable resources;

- c) Crawley has nothing to do with executing a task by co-operation of first and second network elements.
- d) There is no reason to combine Crawley with Titmuss, or Crawley and Titmuss with Morris.
- e) The combination of Crawley and Titmuss is a result of hindsight.
- f) Masuoka has no disclosure of a requesting network element that requests available resources cooperating with a sharing network element having available resources in such a manner that the sharing network element completes the task of the requesting network element.

Examiner respectfully submits the Applicant has misinterpreted the prior art of record.

5. Regarding item a) Titmuss teaches a variety of agents communicating with each other for the purpose of setting up a call, (page 7, paragraphs 172-179). In this passage, a customer agent selects a proposed service from a resource agent in order to set up the call. In considering Applicants claimed invention, Examiner has interpreted the customer agent, and resource agent to be, interchangeably, the first and second network elements of the claimed invention, and the services used for setting up a call to be the shareable resources of the claimed invention.

6. Regarding item b), as previously mentioned, Examiner has interpreted the agents taught by Titmuss to be the network elements of the claimed invention. Thus, it

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is clear in the teachings of Titmuss that a first network element (resource agent) and a second network element (customer agent) cooperate via a network managing agent to execute a task (the setting up of a call) as a result of a negotiation phase including an agreement of a cost for the use of shareable resources (services provided by the resource agent), (page 7, paragraphs 172-173).

7. Regarding item c), Crawley teaches a method and apparatus for providing QoS routing in a network in which network elements (nodes) broadcast their available resources to each other, (col. 4, lines 64-67, col. 5, lines 1-11). As indicated in the previous action, a first and second network element cooperates to execute the task of providing QoS routing, (col. 5, lines 27-36).

8. Regarding item d), in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teachings of Titmuss and Morris were in the knowledge generally available to one of ordinary skill in the art. Therefore, although Crawley didn't explicitly teach all the

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features of the claimed invention, such features were well known by one of ordinary skill in the art at the time of the present invention.

9. Regarding item e), In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

10. Regarding item f), a requesting network element that requests available resources cooperating with a sharing network element having available resources in such a manner that the sharing network element completes the task of the requesting network element may be implied in the teachings of Crawley, (col. 5, lines 27-36). Nevertheless, Examiner cited Masuoka to show that completing a task at a first network element, by using resources at a second network element was well known in the art at the time of the present invention. Therefore, if not implied in the teachings of Crawley, the combined teachings of Crawley and Masuoka clearly provide a means for a requesting network element that requests available resources cooperating with a

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sharing network element having available resources in such a manner that the sharing network element completes the task of the requesting network element.

11. Furthermore, the Examiner has interpreted the claim language as broadly as possible. It is also the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in a manner that distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterated the need for Applicant to define the claimed invention more clearly and distinctly. Accordingly the references supplied by the examiner in the previous office action covers the claimed limitations. The rejections are thus sustained. Applicant is requested to review the prior art of record for further consideration.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 14, 16, 20, are rejected under 35 U.S.C. 102(e) as being anticipated by Titmuss.

14. In considering claim 14, Titmuss teaches a network resource sharing protocol between first and second elements of a network, the protocol including: a discovery phase, (page 7, paragraph 171); a negotiation phase including an agreement of a cost for the use of shareable resources of a first network element by a second network element, (page 7, paragraph 172); a fulfillment phase, (page 7, paragraph 173); the negotiation phase including an agreement of a cost for the use of shareable resources of the first network element by a second network element during the fulfillment phase, (page 7, paragraphs 172-173); the fulfillment phase including co-operation between the first and second network elements of the shareable resources of the first element in accordance with the agreement made during the negotiation phase, (page 7, paragraphs 172-173).

15. In considering claim 16, Titmuss discloses the negotiation phase including a second network element for requesting at least some shareable resources of a first network element. See page 7, paragraph 172.

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16. In considering claim 20, Titmuss further discloses the fulfillment phase including termination of the communication between first and second network elements. See pages 8-9, paragraphs 206-211.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1, 21-24, 35, 39, 43, are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley et al., (hereinafter Crawley), U.S. Patent 5,995,503. in view of Titmuss.

19. In considering claims 1, 21-24, and 43, Crawley discloses a method of sharing resources in a connectionless network comprising: a network including at least two network elements (col. 3, lines 57-65); broadcasting data over the network by a first network element, including within the data broadcast by the at least two network elements, the resources of the first network element available for sharing, (col. 4, lines 64-67, col. 5, lines 1-11); requesting the use of at least part of the available resources of a first network element by a second network element (col. 5, lines 27-30); executing a task by co-operation of first and second network elements by using the requested

resources of the first network element and resources of the second network element, (col. 5, lines 32-36); and, broadcasting resource reservation advertisements over the network (col. 5, lines 14-26).

It is inherent that resources of a first network element are released by a second network element upon completion of a task since resource reservation advertisements are broadcasted over the network. If resources were to never be released upon completion of a task, there would be no need for the broadcasting of resource reservations.

Although the disclosed method of Crawley shows substantial features of the claimed invention, it fails to explicitly disclose: first and second network elements negotiating a cost for the resources.

Nevertheless, in a similar field of endeavor, Titmuss discloses a telecommunications method comprising: network elements negotiating a cost for a resource (page 7, paragraph 172).

It is well known in the art that there can be a cost associated with utilizing particular resources. Given the teachings of Titmuss, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley with Titmuss, in order to negotiate a cost for the resources providing a QoS. The motivation for doing so would have been to provide an efficient means for setting up routes, and increasing the size of a network without generating an enormous amount of traffic across the network, Titmuss, page 1, paragraphs 11-13.

20. In considering claims 35 and 39, Crawley discloses a method of sharing resources in a connectionless network comprising: a network including at least first, second and third network elements (col. 3, lines 57-65); broadcasting data over the network by first and second network elements, including within the data broadcast by the first and second network elements, the respective resources of the first and second network elements available for sharing by other network elements of the network, (col. 4, lines 64-67, col. 5, lines 1-11); requesting, by a third network element, the use of at least part of the available resources of first and second network elements (col. 5, lines 27-30); executing a task by co-operation of first, second and third network elements by using the requested resources of the first and second network elements and resources of the third network element, (col. 5, lines 27-36); and, broadcasting resource reservation advertisements over the network (col. 5, lines 14-26).

It is inherent that resources of first and second networks element are released by a third network element upon completion of a task since resource reservation advertisements are broadcasted over the network. If resources were to never be released upon completion of a task, there would be no need for the broadcasting of resource reservations.

Although the disclosed method of Crawley shows substantial features of the claimed invention, it fails to explicitly disclose: network elements negotiating a cost for the resources.

Nevertheless, in a similar field of endeavor, Titmuss discloses a telecommunications method comprising: network elements negotiating a cost for a resource (page 7, paragraph 172).

It is well known in the art that there can be a cost associated with utilizing particular resources. Given the teachings of Titmuss, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley with Titmuss, in order for the first second and third network elements to negotiate a cost for the resources providing a QoS. The motivation for doing so would have been to provide an efficient means for setting up routes, and increasing the size of a network without generating an enormous amount of traffic across the network, Titmuss, page 1, paragraphs 11-13.

21. Claims 3-7, 36-38, 40-42, 44-48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Titmuss, and further in view of Morris et al. (hereinafter Morris), U.S. patent publication 2003/0149794.

22. Regarding claims 3, 6, 36-37, 40-41, and 44-48, although the disclosed method of Crawley in view of Titmuss, shows substantial features of the claimed inventions, it fails to explicitly disclose: providing the network in the form of a piconet, or wide band short-range wireless network.

Nevertheless, in a similar field of endeavor, Morris discloses a method for management of an extended network comprising: providing the network in the form of a piconet (pg. 2, paragraph 15).

It is well known in the art that wireless networks are taking the place of many non-wireless networks. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Titmuss, with Morris, in order to have network elements in a wide band, short range wireless network, or piconet. The motivation for doing so would have been to utilize up-to-date mobile devices such as laptops, pda's etc. as the network elements in the method disclosed by Crawley.

23. Regarding claim 4, although the disclosed method of Crawley in view of Titmuss shows substantial features of the claimed invention, it fails to explicitly disclose: providing at least one of the network elements in the form of a mobile device.

Nevertheless, Morris discloses a method for management of an extended network comprising: providing the network elements in the form of a mobile device (pg. 2, paragraph 16).

It is well known in the art that mobile devices are very convenient, and would have been present in most networks at the time of the invention. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Titmuss, with Morris, in order to have mobile devices as the hosts in the network disclosed by Crawley. The

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motivation for doing so would have been to provide convenient up-to-date wireless devices such as laptops, pda's etc. as the hosts in the method disclosed by Crawley.

24. Regarding claim 5, although the disclosed method of Crawley and Titmuss, shows substantial features of the claimed invention, it fails to explicitly disclose: providing geographically distributed wireless base stations.

Nevertheless, Morris discloses a method for management of an extended network comprising: providing a geographically distributed wireless base station (pg. 1, paragraph 3).

It is well known in the art that mobile nodes can communicate with each other by means of a base station. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Titmuss, with Morris, in order to have a wireless network comprising geographically distributed wireless base stations. The motivation for doing so would have been to provide a communication means between the mobile devices, incase they were out of range of each other.

25. Regarding claims 7, 38, and 42, the disclosed method of Crawley, shows network connections, and memory as resources to be shared. See col. 4, lines 64-67, col. 5, lines 1-11.

26. Claims 9, 12, 13, 25, 30-34, 54, are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Masuoka.

27. In considering claims 9, 25, 31-34, and 54, Crawley et al. discloses a method of sharing resources in a connectionless network comprising: a network including at least two network elements (col. 3, lines 57-65); broadcasting data over the network by a first network element, indicating the resources of the first network element available for sharing, within the data (col. 4, lines 64-67, col. 5, lines 1-11); requesting the use of at least part of the available resources of a first network element by a second network element (col. 5, lines 27-30); executing a task by co-operation of first and second network elements (col. 5, lines 32-36).

Although the disclosed method of Crawley shows substantial features of the claimed invention, it fails to expressly disclose: completing a task at a first network element by using resources at a second network element.

Nevertheless, completing tasks at a first network element by using resources at a second network element was well known in the art at the time of the present invention. This is exemplified in a similar field of endeavor where Masuoka discloses a method for sharing resources over a network comprising: completing a task at a first network element, by using resources at a second network element, (col. 22, lines 49-52).

Given the teachings of Masuoka, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley to show completing a task at a first network element by using resources at a

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second network element. This would have shown a well-known means for effectively utilizing remote resources, Masuoka, col. 2, lines 63-67, col. 3, lines 1-9.

28. In considering claim 12, the network elements in the network taught by Crawley comprises routers. See col. 4, lines 40-44.

29. Regarding claim 13, the disclosed method of Crawley, shows network connections, and memory as resources to be shared. See col. 4, lines 64-67, col. 5, lines 1-11.

30. Regarding claim 30, the disclosed method of Crawley, shows network connections, and memory as resources to be shared. See col. 4, lines 64-67, col. 5, lines 1-11.

31. Claims 10, 11, 26-28, 49-53, 55, are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Masuoka, and further in view of Morris.

32. Regarding claims 10, 11, 26, 49-53, and 55, although the disclosed method of Crawley in view of Masuoka, shows substantial features of the claimed inventions, it fails to explicitly disclose: providing the network in the form of a wireless network.

Nevertheless, in a similar field of endeavor, Morris discloses a method for management of an extended network comprising: providing the network in the form of a wide bandwidth short-range wireless network, or a piconet (pg. 2, paragraph 15).

It is well known in the art that wireless networks are taking the place of many non-wireless networks. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Masuoka, with Morris, in order to have network elements in a wide band short-range wireless network, or piconet. The motivation for doing so would have been to utilize up-to-date mobile devices such as laptops, pda's etc. as the network elements in the method disclosed by Crawley.

33. Regarding claim 27, although the disclosed method of Crawley in view of Masuoka shows substantial features of the claimed invention, it fails to explicitly disclose: providing at least one of the network elements in the form of a mobile device.

Nevertheless, Morris discloses a method for management of an extended network comprising: providing the network elements in the form of a mobile device (pg. 2, paragraph 16).

It is well known in the art that mobile devices are very convenient, and would have been present in most networks at the time of the invention. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Masuoka, with Morris, in order to have mobile devices as the hosts in the network disclosed by Crawley. The

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motivation for doing so would have been to provide convenient up-to-date wireless devices such as laptops, pda's etc. as the hosts in the method disclosed by Crawley.

34. Regarding claim 28, although the disclosed method of Crawley and Masuoka, shows substantial features of the claimed invention, it fails to explicitly disclose: providing geographically distributed wireless base stations.

Nevertheless, Morris discloses a method for management of an extended network comprising: providing a geographically distributed wireless base station (pg. 1, paragraph 3).

It is well known in the art that mobile nodes can communicate with each other by means of a base station. Given the teachings of Morris, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Crawley and Masuoka, with Morris, in order to have a wireless network comprising geographically distributed wireless base stations. The motivation for doing so would have been to provide a communication means between the mobile devices, incase they were out of range of each other.

35. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titmuss in view of Crawley.

36. In considering claim 15, although the resource sharing protocol disclosed by Titmuss shows substantial features of the claimed invention, it fails to disclose: broadcasting a notification of shareable resources.

Nevertheless, Crawley discloses: broadcasting data over the network by a first network element, indicating the resources of the first network element available for sharing, within the data (col. 4, lines 64-67, col. 5, lines 1-11).

Given the teachings of Crawley, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Titmuss to have the first network element broadcast a notification of its shareable resources in the discovery phase. This would allow the mobile party (or second network element) to know the available network resources before transmission, and would therefore alleviate the need for the second network element to broadcast an indication of the format in which it will transmit, Titmuss, page 7, paragraph 170.

37. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titmuss, in view of Masuoka.

38. In considering claim 19, although the disclosed method of Titmuss shows substantial features of the claimed invention, it fails to expressly disclose: execution of a task and passing the result to a second network element.

Nevertheless, completing tasks at a first network element by using resources at a second network element was well known in the art at the time of the present invention.

This is exemplified in a similar field of endeavor where Masuoka discloses a method for sharing resources over a network comprising: executing a task by a first network element, and passing a result of the task to a second network element, (col. 3, lines 7-9).

Given the teachings of Masuoka, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Titmuss to show the fulfillment phase including the execution of a task by a first network element and the passing of a result of the task to a second network element. This would have shown a well-known means for effectively utilizing remote resources, Masuoka, col. 2, lines 63-67, col. 3, lines 1-9.

Conclusion

39. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

40. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (571) 272-3940. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HP/
6/2/05


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER